

REMARKS

Reconsideration of this application, in view of the foregoing amendments and the following remarks, is respectfully requested.

Claim Rejections - 35 USC § 102

Claims 23 and 27 are rejected under 35 U.S.C. 102(b) as being anticipated by Decker et al. U.S. Patent 4,980,897. Applicants respectfully traverse these rejections.

To anticipate a claim, the reference must teach each and every limitation of the claim. See MPEP §2131. Decker et al. does not teach all limitations of claim 23.

The Examiner has stated that "Decker et al. disclose a communication arrangement in Figure 1 comprising a 1:N rate encoder (multi-channel encoder 2) coupled to an input data stream and configured to reproduce a symbol N times ..." (emphasis added). Applicants respectfully point to the Examiner that the multi-channel encoder 2 is actually a trellis encoder. Further, it does reproduce an incoming symbol N times as recited in claim 23 instead it encodes bits to be transmitted on various carriers. For example, in column 7, lines 1-50, Decker et al. describes that bits to be transmitted in a symbol are sequentially encoded by the multi-channel encoder 2 according to the carrier. Thus, basically it multiplexes the encoding for multiple carriers. In a clear contrast, claim 23 recites that 1:N encoder is configured to reproduce symbol N times. Decker et al. does not even discuss reproducing a symbol as recited in claim 23. Thus, Decker et al does not teach this limitation.

Further as to performing soft-combining of signals received from the outputs of the transmission arrangement, Decker et al. does not describe soft combining at the receiver. The Examiner has cited Viterbi algorithm (col. 12, lines 3-10) as the soft combining of signal. Applicants respectfully point to the Examiner that in the cited sections, Decker et al. describes estimation of vectors retrieved by demodulating each of the carriers $f_0 - f_n$. Decker et al. does not soft combine received symbols but instead demodulates carriers and finds an estimation of vectors using the Viterbi algorithm. Therefore, Decker et al. does not teach all limitations of claim 23 and accordingly, claim 23 is patentably distinguishable from Decker et al.

Claim 27 has been rejected in the manner of claim 23, accordingly, claim 27 is patentably distinguishable from Decker et al. for at least the same reasons as claim 23.

Claims 24 and 28 are rejected under 35 U.S.C. 102(b) as being anticipated by Decker et al. in view of Sayiner et al. U.S. Patent 6,097,769. Applicants respectfully traverse these rejections.

Claims 24 and 28 depend from claims 23 and 27 respectively. Accordingly, claims 24 and 28 are patentably distinguishable from cited references for at least the same reasons as claims 23 and 27. Regarding claim 24 and 28, the Examiner has generally cited Viterbi algorithm and transition based on MSE. Applicants respectfully point to the Examiner that claims 24 and 28 recite various methods for soft combining including 1) mean squared error estimation, 2) identification of burst noise within a data packet, 3) weighted combining, and 4) selective combining. To anticipate a claim under 35 USC §102(b), the reference must teach each and every limitation of the claim. The Examiner has cited Viterbi algorithm using the MSE; however, the Examiner has not cited any reference that teach each element of claims 24 and 28 as recited. Accordingly, claims 24 and 28 are further patentably distinguishable from the cited references.

Claim Rejections - 35 USC § 103

Claims 25 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Decker et al. in view of Lathrop U.S. Patent 5,701,427. Applicants respectfully traverse these rejections.

Claims 25 and 29 depend from claims 23 and 27 respectively. Accordingly, claims 25 and 29 are patentably distinguishable from cited references for at least the same reasons as claims 23 and 27. Further regarding claims 25 and 29, the Examiner has stated that “Decker et al. disclose a communication arrangement as described above, but do not expressly disclose transmitting an original message using one of the channels and performing retransmission using a remaining channel.” (Emphasis added). Further citing Lathrop, the Examiner has stated that “Lathrop discloses a communication arrangement where an information message is transmitted over a channel on a communications link 12, and a second retransmit channel is used to transmit retransmission information (col. 7, lines 22-33).” (Emphasis added). Applicants respectfully point to the Examiner that First, claims 25 and 29 recite a plurality of distinct transmit channels. In contrast, Lathrop describes a N-way connection using a multicast message to communicate information to a plurality of terminals connected to the communication link 12. The multicast message packets are addressed to a predetermined multicast address at each

terminal on the communication link 12 (*see* col. 6, line 63 – col. 7, line 45). When a retransmit is required, a terminal requests a retransmit and adapts its network interface to monitor a particular type of multicast packet containing a retransmit multicast address. Only those terminals listen to the retransmit multicast information that have requested a retransmit of the multicast. The retransmission only occurs after receiving a retransmit request from a terminal.

In contrast, Decker et al. does not communicate via a multicast N-way communication link. To include Lathrop's N-way communication method, one skilled in the art will have to completely change the function of Decker et al., which will render Decker et al. inoperable for its intended purpose. Further, even if some how Lathrop's N-way communication method is incorporated in Decker et al., the combination still does not teach a plurality of distinct transmit channels as recited in claims 25 and 29. Accordingly, claims 25 and 29 are clearly patentably distinguishable from the combination of cited references.

Claims 26 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Decker et al. in view of Fenwick et al. U.S. Patent 4,001,692. Applicants respectfully traverse these rejections.

Claims 26 and 30 depend from claims 23 and 27 respectively. Accordingly, claims 26 and 30 are patentably distinguishable from cited references for at least the same reasons as claims 23 and 27.

Applicant believes this application and the claims herein to be in a condition for allowance. Should the Examiner have further inquiry concerning these matters, please contact the below named attorney for Applicant.

Respectfully submitted,



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